

ABSTRACT

A method of controlling SO_3 flue gas concentration in a combustion process utilizing a SCR using a sulfurous fuel, the method steps including: providing a combustion system with low NO_x burners and SCR; partially combusting the fuel in a first stage to create a reducing environment; maintaining the reducing environment for a sufficient time period such that SO_3 is reduced to SO_2 to achieve a desirable level of SO_3 ; combusting the remainder of the fuel and combustion intermediates in a second stage with oxidizing environment; reducing the remaining NO_x with the SCR; thereby reducing emissions NO_x .